#6

What is claimed:

8. A rotary piston continuous flow expandable chamber device comprising a hollow toroid cylinder housing with a smooth inner surface, a rotor rotably mounted utilizing a crankshaft attached to said rotor in said cylinder, one or a plurality of pistons mounted radially on said rotor, an intake port with means for the attachment of an obliquely angled intake manifold, a movable conformably shaped and sized valve mounted near the opening of said intake port that does not ever fully close off said intake port yet functions to allow said piston to travel through while isolating the working fluid from a retrograde course to the exhaust port and allowing the continuous compartmentalized flow of fluid or combustion without interruption, an exhaust port located at a position on the periphery of said toroid cylinder housing said position determined by the number of pistons on said rotor for evacuating the working fluid after it has been used.

9. A rotary piston internal continuous combustion engine according to claim 8, an intake port with means for the attachment of an obliquely mounted combustor or combustors containing an inner reaction cage that produces controlled stratified flashover combustion as described in operation main embodiments, said combustor having the novel property of an instant two step passive compression process that is achieved by the unique design of its

inner reaction cage, and any or all of the following, reductions to its neck or nozzle, by its valve shield and diffuser, said combustor mounted at an oblique angle to said housing, providing both a pressurized force and an impacting force upon the tops of said pistons, said force and overall device efficiency aided by oblique angles, with means for supplying said combustor with fuel and air and means for igniting said mixture, said combustion providing both a pressurized force and an impacting force on said pistons, said impacting force and overall device efficiency is enhanced by the design incorporating oblique angles.

10. A rotary piston internal continuous combustion engine according to claim 9, wherein said toroidal cylinder housing has a means for attaching an exhaust manifold to said exhaust port, a means for attaching an electro gas dynamic device to said exhaust manifold for the generation of electricity for use by the engine and for other uses.

11. A rotary piston internal continuous combustion engine according to claim 10, wherein said toroidal cylinder housing comprises water jackets and water cooling systems, with means for attachment of steam extracting fittings and means for extracting steam from the process of cooling said

engine and its components, utilizing said steam to aid in the process of power production either in the way of reintroduction of this steam into the combustor helping push the pistons or in a separate isolated process and additional device that imparts power to the common shaft with means for recovering said steam, cooling it, phase changing it back into liquid, circulating and reusing it.

12. A rotary piston steam or fluid engine as in claim 8, an intake port for the admission of steam or working fluid, an obliquely mounted intake housing with means for attachment to said toroid housing for providing both a pressurized force and an impacting force upon the tops of said pistons, said impacting force and overall device efficiency enhanced by oblique angles, thereby forcing the steam or working fluid to pressure and force the piston forward toward the exhaust port at which point the working fluid will exit the device and another piston will have moved up to the seal point within the toroid cylinder or housing and said process will be repeated imparting a continuous rotational action to the rotor.

13. A rotary piston steam or fluid engine according to claim 12, with means for recovering used steam, cooling it and phase changing it back into liquid, circulating and reusing it.

14. A rotary piston expandable chamber fluid metering device according to claim 8, an intake port on said cylinder housing for the admission of fluid utilizing the fluid's pressure into an expandable chamber of measured or predetermined volume limited by the action of said valve and said pistons, thereby forcing said piston forward in a measured volume and out the exhaust port, thereby allowing said device to meter, measure or dispense specific units of measured volumes of fluid at either a very fast or slow rate in very large or small quantities.

15. A rotary piston power assist device according to clam 8. comprising a an intake port on said cylinder housing for the admission of working fluid into an obliquely angled intake port housing or manifold providing both a pressurized force and an impacting force upon the tops of said pistons, said force and overall device efficiency aided by oblique angles, said volume limited by the action of a conformably shaped valve mounted near said intake port within said intake port housing with means for attachment to said toroid cylinder housing,

16. A rotary piston hydraulic pump according to claim 8, utilizing a powered crankshaft in said cylinder housing , an intake manifold with means for attachment to said housing for the admission of hydraulic or working fluid, as demonstrated in figs 2, 6, 8, and 8a mounted near the intake port, thereby forcing

said hydraulic or working fluid to be forced by the piston forward toward the exhaust port at which point the working fluid will exit the device and another piston will have moved up to the seal point within the toroid cylinder or housing and said process will be repeated imparting a continuous fluid flow, whereby allowing said device to pump specific units of measured volumes of fluid at either a very fast or slow rate in very large or small quantities.

17. A rotary piston expandable chamber bio-fluid or heart pump according to claim 8 made of an inert nonbioreactive material comprising a hollow conforming shape toroid cylinder housing with a smooth inner surface, a rotor of conforming shape rotably mounted utilizing a powered shaft in said cylinder housing with one or a plurality of radially mounted inertly lubricated modified pistons with means for attachment to said rotor, an intake port on said cylinder housing for the admission of bio-fluid, blood, etcetera, an obliquely angled intake housing for reducing bio-fluid turbulence with means for attachment fusing or formed in one or several pieces to said toroid stator, a conformably shaped valve or valves as demonstrated in figs 2, 6, 8, and 8a mounted near the intake port, said port being within said intake port housing, said valve or valves having the movement and function as to allow the revolving pistons through yet isolate the bio-fluid and preventing it from a retrograde

course out the adjacent obliquely angled exhaust port, said valve never closing off flow through intake port allowing the continuous flow of fluid without interruption , thereby forcing said bio-fluid to be pushed or forced gently by the piston forward toward said exhaust port at which point the bio-fluid will exit the device and another or the same piston will have moved up to the dynamic seal point within the toroid cylinder or housing and said process will be repeated imparting a continuous smooth bio-fluid flow without undue agitation, whereby allowing said device to pump bio-fluids at a very fast rate in large volumes or a lower rate according to the needs of the body at the moment yet minimizing the effects of agitation and trauma on these fluids and their cells.

18. A rotary piston expandable chamber bio-fluid or heart pump according to claim 17, wherein said pistons have one or a plurality of enhanced piston rings mounted in grooves of said pistons.

19. A rotary piston expandable chamber bio-fluid or heart pump according to claim 17, wherein said pistons and said toroid cylinder housing are permanently bonded with an inert or non bioreactive lubricant.

20. A rotary piston expandable chamber bio-fluid or heart pump

according to claim 17, wherein said pump has means for detecting and controlling the body's need for variations in fluid flow.

21. A rotary piston expandable chamber air pump according to claim 8, utilizing a powered crankshaft in said cylinder an intake port on said cylinder housing for the admission of air, gas or working fluid, an obliquely angled intake housing with means for attachment to said toroid housing, a conformably shaped valve or valves as demonstrated in figs 2, 6, 8, and 8a mounted near the intake port, thereby forcing said air, gas or working fluid to be forced by the piston forward toward the exhaust port at which point the air, gas or working fluid will exit the device and another piston will have moved up to the seal point within the toroid cylinder or housing and said process will be repeated imparting a continuous air, gas or working fluid flow.

22. A rotary piston continuous flow expandable chamber dynamic displacement device, comprising a hollow toroid cylinder housing with a smooth inner surface, a rotor rotably mounted utilizing a shaft attached to said rotor in said cylinder, one or a plurality of pistons mounted radially on said rotor, an intake port with means for the attachment of an obliquely angled intake manifold, a movable conformably shaped and sized valve mounted near the opening of said intake port that does not ever fully close off said

intake port yet functions to allow said piston to travel through while isolating the working fluid from a retrograde course to the exhaust port allowing the continuous flow of fluid, an exhaust port located at a position on the periphery of said toroid cylinder housing, said position determined by the number of pistons on said rotor for evacuating the working fluid after it has been used, fluid will then exit the device and another or the same piston will have moved up to the dynamic amplification or seal point within the toroid cylinder housing and said process will be repeated imparting a continuous flow, said valve has means for controlling its position and movement converting said device into a dynamic displacement apparatus so that as the revolutions increase and the load decreases the valve will start to assume a less obstructive position, from opening and closing completely to a kind of rhythmic flutter or waving in tune to the passing of the pistons acting as a fluidic amplifier combining positive displacement with the dynamic effect hence the term dynamic displacement, until balance can be reached and maintained at which point the valve may attain a fully unobstructive position until the load increases or revolutions decrease for any reason, then the valve can readily re-engage as a fluidic amplifier or assume full range movement or operation, see conclusions, ramifications and scope page 20.

23. A rotary piston internal continuous combustion dynamic displacement engine according to claim 22, an intake port with means for the attachment of an obliquely mounted combustor or combustors containing an inner reaction cage or cages that produces controlled stratified flashover combustion as described in operation main embodiments, said combustor having the novel property of an instant two step passive compression process that is achieved by the unique design of its inner reaction cage, and any or all of the following, reductions to its neck or nozzle, by its valve shield and diffuser, said combustor mounted at an oblique angle to said housing, providing both a pressurized force and an impacting force upon the tops of said pistons, said force and overall device efficiency aided by oblique angles, with means for supplying said combustor with fuel and air and means for igniting said mixture, said combustion providing both a pressurized force and an impacting force on said pistons, said impacting force and overall device efficiency is enhanced by the design incorporating oblique angles.

24. A rotary piston internal continuous combustion dynamic displacement engine according to claim 22, wherein said toroidal cylinder housing has a means for attaching an exhaust manifold to said exhaust port, a means for attaching an electro gas dynamic device to said exhaust manifold for the generation of electricity for use by the engine and for other uses.

25. A rotary piston internal continuous combustion dynamic displacement engine according to claim 22, wherein said toroidal cylinder housing comprises water jackets and water cooling systems, with means for attachment of steam extracting fittings and means for extracting steam from the process of cooling said engine and its components, utilizing said steam to aid in the process of power production either in the way of reintroduction of this steam into the combustor helping push the pistons or in a separate isolated process and additional device that imparts power to the common crankshaft with means for recovering said steam, cooling it, phase changing it back into liquid, circulating and reusing it.

26. A rotary piston expandable chamber dynamic displacement steam or fluid engine as in claim 22, an intake port for the admission of steam or working fluid, an obliquely mounted intake housing with means for attachment to said toroid housing for providing both a pressurized force and an impacting force upon the tops of said pistons, said impacting force and overall device efficiency enhanced by oblique angles, thereby forcing the steam or working fluid to pressure and force the piston forward toward the exhaust port at which point the working fluid will exit the device and another piston will have moved up to the seal point within the toroid cylinder or housing and said process will be repeated imparting a continuous rotational action to the rotor.

27. A rotary piston expandable chamber dynamic displacement steam or fluid engine according to claim 22, with means for recovering used steam, cooling it and phase changing it back into liquid, circulating and reusing it.

28. A rotary piston expandable chamber dynamic displacement fluid metering device according to claim 22, an intake port on said cylinder housing for the admission of fluid utilizing the fluid's pressure into an expandable chamber of measured or predetermined volume limited by the action of said valve and said pistons, thereby forcing said piston forward in a measured volume and out the exhaust port, thereby allowing said device to meter or dispense specific units of measured volumes of fluid at either a very fast or slow rate in very large or small quantities.

29. A rotary piston expandable chamber dynamic displacement power assist device according to claim 22, comprising a an intake port on said cylinder housing for the admission of working fluid into an obliquely angled intake port housing or manifold providing both a pressurized force and an impacting force upon the tops of said pistons, said force and overall device efficiency aided by oblique angles, said volume limited by the action of a conformably shaped valve mounted near said intake port within said intake port housing with means for attachment to said toroid cylinder housing,

30. A rotary piston expandable chamber dynamic displacement hydraulic pump according to claim 22, utilizing a powered crankshaft in said cylinder housing, an intake manifold with means for attachment to said housing for the admission of hydraulic or working fluid, as demonstrated in figs 2, 6, 8, and 8a mounted near the intake port, thereby forcing said hydraulic or working fluid forward toward the exhaust port at which point the working fluid will exit the device and another piston will have moved up to the seal point within the toroid cylinder or housing and said process will be repeated imparting a continuous fluid flow, whereby allowing said device to pump specific units of measured volumes of fluid at either a very fast or slow rate in very large or small quantities.

31. A rotary piston expandable chamber dynamic displacement bio-fluid or heart pump according to claim 22, made of an inert non-bioreactive material, utilizing a powered shaft in said cylinder housing with one or a plurality of radially mounted inertly lubricated modified pistons with means for attachment to said rotor, an obliquely angled intake port on said cylinder housing for the admission of bio-fluid, blood, etcetera, an obliquely angled intake housing for reducing bio-fluid turbulence with means for attachment, fusing or formed in one or several pieces to said toroid housing, a conformably shaped valve or valves as demonstrated in figs 2, 6, 8, and 8a mounted near the intake port, said port being

within said intake port housing, said valve or valves having the movement and function as to allow the revolving pistons through yet isolate the bio-fluid and preventing it from a retrograde course out the adjacent obliquely angled exhaust port, said valve never closing off flow through intake port allowing the continuous flow of fluid without interruption , thereby forcing said bio-fluid to be pushed or forced gently by the piston forward toward said exhaust port at which point the bio-fluid will exit the device and another or the same piston will have moved up to the dynamic amplification or seal point within the toroid cylinder or housing and said process will be repeated imparting a continuous smooth bio-fluid flow without undue agitation, whereby allowing said device to pump bio-fluids at a very fast rate in large volumes or a lower rate according to the needs of the body at the moment yet minimizing the effects of agitation and trauma on these fluids and their cells.

32. A rotary piston expandable chamber dynamic displacement bio-fluid or heart pump according to claim 31, wherein said pistons have one or a plurality of enhanced piston rings mounted in grooves of said pistons.

33. A rotary piston expandable chamber dynamic displacement bio-fluid or heart pump according to claim 31, wherein said pistons and said toroid cylinder housing are permanently bonded with an inert or non bioreactive lubricant.

34. A rotary piston expandable chamber dynamic displacement bio-fluid or heart pump according to claim 31, wherein said pump has means for detecting and controlling the body's need for variations in fluid flow.

35. A rotary piston expandable chamber dynamic displacement air pump according to claim 22, utilizing a powered shaft in said cylinder an intake port on said cylinder housing for the admission of air, gas or working fluid, an obliquely angled intake housing with means for attachment to said toroid housing, a conformably shaped valve or valves as demonstrated in figs 2, 6, 8, and 8a mounted near the intake port, thereby forcing said air, gas or working fluid to be forced by the piston forward toward the exhaust port at which point the air, gas or working fluid will exit the device and another piston will have moved up to the seal point within the toroid cylinder or housing and said process will be repeated imparting a continuous air, gas or working fluid flow.